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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,030	08/09/2006	Paul Schalk	DC10028 PCT1	4159

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EXAMINER	
LOPEZ ESQUERRA, ANDRES	

ART UNIT	PAPER NUMBER
2818	

NOTIFICATION DATE	DELIVERY MODE
07/26/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patents.admin@dowcorning.com

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/589,030	SCHALK ET AL.	
	Examiner	Art Unit	
	Andrés López-Esquerro	2818	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2006.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>08/09/2006</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Specification***

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
2. The disclosure is objected to because of the following informalities: page 15 includes a figure, the same cannot be present in the specification, it must be moved to the drawings section and numbered.

Appropriate correction is required.

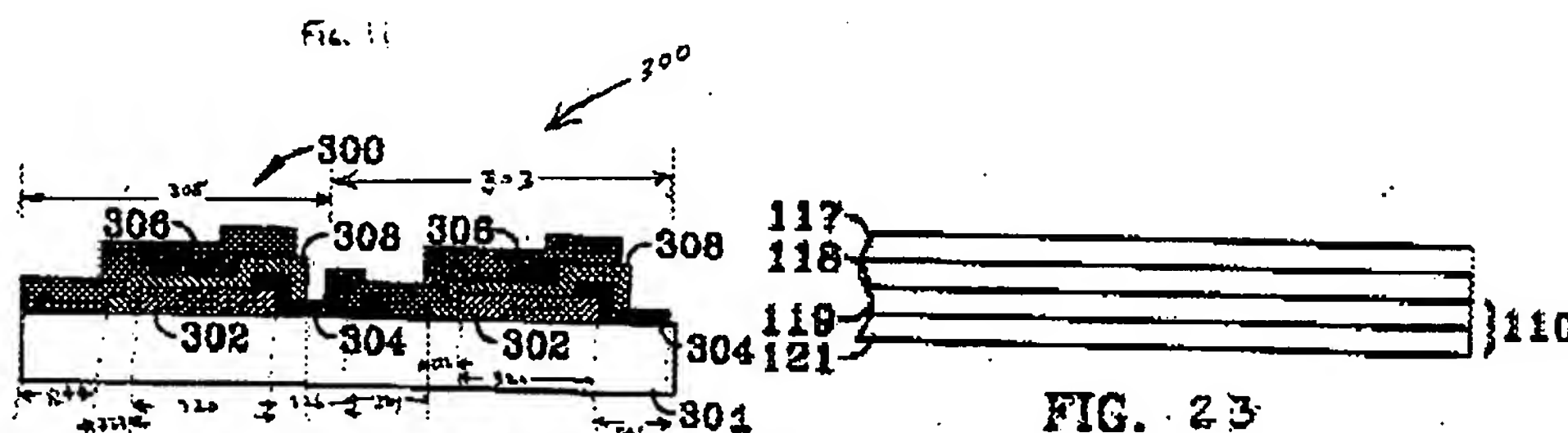
### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1 – 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duggal et al. US 2002/0190661 (Druggal).



6. As for claim 1, Duggal discloses (Pages 5 – 6 [0090], Page 10 [0134] – [0136]) and shows in Fig. 11 and 23 an OLED comprising:

- a. a substrate (301) having a first opposing surface and a second opposing surface;
- b. a first electrode layer (302) overlying the first opposing surface;
- c. a light-emitting element (308) overlying the first electrode layer, the light-emitting element comprising:
  - i. a hole-transport layer (118), and;
  - ii. an emissive/electron-transport layer (119);(1) wherein the hole-transport layer and the emissive/electron-transport layer lie directly on one another, and;
- d. a second electrode layer (306) overlying the light-emitting element (308).

7. Duggal fails to teach the hole-transport layer comprising a cured polysiloxane.

8. Duggal (fig. 22) discloses (Page 10 [0134] – [0135]) the use of polysilanes (applicant's polysiloxane) as the hole transport layer, furthermore it discloses different possible variation of the same in a second embodiment.

Duggal (fig. 22) is evidence that ordinary workers in the art would find a reason, suggestion or motivation to use polysilanes as the hole transport layer.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Duggal by use polysilanes as the hole transport layer in any of the disclose variation for such advantages as providing an OLED exhibit a sharp photoluminescence with a high quantum efficiency in the ultraviolet region (Page 10 [0134]).

9. As to the limitation of "prepared by applying an organosilicon composition to form a film and exposing the film to moisture, wherein the organosilicon composition comprises (A) at least one silane having the formula  $R_1 SiX_3$  and (B) an organic solvent, wherein each  $R_1$  is independently selected from  $-Y-Cz$ ,  $-(CH_2)_m-CnF_{2n+1}$ , and  $-(CH_2)_m-C_6F_5$ , wherein  $Cz$  is N-carbazolyl,  $Y$  is a divalent organic group,  $m$  is an integer from 2 to 10,  $n$  is an integer from 1 to 3, and  $X$  is a hydrolysable group" is considered as a product by process limitation. "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777F, 2d 659, 698, 227 USPQ 964, 966 (Fed. Cir. 1985); see also MPEP 2113.

10. As for claims 2 – 8, the recited limitations of these claims are considered as product by process limitations. "Even though product-by-process claims are limited by

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and defined by the process, determination of patentability is based on the product itself.

The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777F, 2d 659, 698, 227 USPQ 964, 966 (Fed. Cir. 1985); see also MPEP 2113.

11. Examiner would like to point out that the above limitations that are Product-by-Process are so because they go to the composition of the organosilicon composition which is used in the process of creating the polysiloxane layer, neither the claims nor the specifications render the composition of the actual composition of the hole transport layer, therefore since the claims only describe the process and not the structure of the final layer that is present in the invention they are considered Product-by-Process.

12. As for claim 9, Duggal discloses (Page 11 [0147])) that the OLED comprises an emissive/electron-transport layer (119) which composition includes a Photoluminescent layer made of an organic dye.

13. As for claim 10, Duggal further discloses (Page 10 [0136]) the OLED comprising a hole-injection layer (117) and an electron injection layer (121).

### ***Conclusion***

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 4,769,292, US 4,933,053, US 2003/0219924, and US 5,869,843.



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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrés López-Esquerro whose telephone number is (571) 272-9753. The examiner can normally be reached on M - Th 6:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven H. Loke can be reached on (571) 272 - 1657. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Andrés López-Esquerro  
Examiner  
Art Unit 2818

ALE



STEVEN LOKE  
SUPERVISORY PATENT EXAMINER

